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February 20, 2013

Mr. Thomas Alcamo
U.S. Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Mailstop HSRL-6J
Chicago, IL 60604

Re: Report of Results and Trend Analysis of Eight Quarters of Sampling at Detmer Spring 2011-2012 and Recommendations for Further Sampling

Dear Tom:

Section 5.1.6 of the "Final Long Term Groundwater Monitoring Plan for the ABB Bloomington Plant Site, Administrative Settlement Agreement and Order on Consent for Removal Action, Docket No. V-W-08-C-890, Addendum 2 to the Bloomington ABB QAPP, APRIL 2012" requires that after eight quarters of monitoring for the site-related contaminants at Detmer Spring have been completed, the contaminant levels will be evaluated by the Mann-Kendall non-parametric trend test and a recommendation will be made as to the duration and frequency of additional sampling at the spring.

This Report of Results and Trend Analysis summarizes the results of water monitoring work completed by CBS Corporation beginning with the First Quarter of 2011 and ending with the Fourth Quarter of 2012 at Detmer Spring. CBS's recommendations are included at the end of the report.

If you have any questions regarding this report, please contact Mike McCann at (812) 335-0424.

Sincerely,

Dorothy M. Alke
Vice President, Environmental Projects

Attachments

cc:
Jeff Lifka, Tetra Tech
John Bassett, AECOM
Russ Cepko, CBS
Elaine M. Hammick, ABB
Patrick Kneip, PSARA
Mike McCann, PSARA
ABB Files

Report of Results and Trend Analysis of Eight Quarters of Sampling at Detmer Spring 2011-2012

ABB BLOOMINGTON PLANT SITE

LONG TERM GROUNDWATER MONITORING PLAN

Addendum 2 to the Bloomington ABB QAPP

Administrative Settlement Agreement and

Order on Consent for Removal Action

Docket No. V-W-08-C-890

February 2013

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1.0 Introduction

1.1 Purpose of the Document

This is a report of results and trend analysis for the "FINAL LONG TERM GROUNDWATER MONITORING PLAN FOR THE ABB BLOOMINGTON PLANT SITE, Administrative Settlement Agreement and Order on Consent for Removal Action, Docket No. V-W-08-C-890, Addendum 2 to the Bloomington ABB QAPP, APRIL 2012" (LTGMP), Reference 1. Section 5.1.6 of the LTGMP requires that after eight quarters of monitoring for the site-related contaminants at Detmer Spring have been completed, the contaminant levels will be evaluated by the Mann-Kendall non-parametric trend test and a recommendation will be made as to the duration and frequency of additional sampling at the spring. This document fulfills that requirement.

1.2 Site Remediation and Previous Reports and Documents

A substantial amount of remedial effort has occurred at the site over the years. These efforts have included soil removals around the perimeter and grounds of the site, building decontamination and demolition, and removal of the concrete building slab and underlying contaminated soils. The activities conducted under the Administrative Order on Consent (AOC), Reference 2, include concrete slab removal, sub-slab soil remediation and removal of all out structures, and final closure (grading and seeding) of the site. A detailed report on these activities can be found in Reference 3, "The Final Report for the Completion of Removal Action for the ABB Plant Site (former Westinghouse Electric Corporation facility), located at 300 North Curry Pike, Bloomington, Monroe County, Indiana."

CBS submitted a Groundwater and Surface Water Investigation Plan (GWIP) to the U.S. Environmental Protection Agency (U.S. EPA) in March 2008, Reference 4. The U.S. EPA conditionally approved the GWIP on May 7, 2008, with the proviso that CBS submit a dye trace work plan to the agency by May 30, 2008. CBS submitted a Scope of Work for Dye Tracing on May 25, 2008.

CBS completed the investigation tasks as described in the GWIP and issued the Report of Results for the Groundwater and Surface Water Investigation in October, Reference 5. A complete description of the site and previous sampling and analysis as well as the site characteristics of geology, hydrology, karst features, and residential well inventory is included in References 3 through 5 as well as Reference 1. These reports should be referenced for details.

2.0 Detmer Spring Sampling and Analysis

Figure 1 shows the location of the former ABB Plant Site. The final configuration of the site and the property boundaries can be found in the final report on the remediation in Reference 3. Figure 1 also shows the location of Detmer Spring. The Detmer property was given to Monroe County for a park, and the Monroe County Parks and Recreation

Department constructed a county park on the property, which opened to the public in October 2012. The results of the sampling and analysis have been transmitted to the U.S. EPA in reports listed as References 6 through 10. These documents contain the field sampling log, chain of custody, and laboratory certificates of analysis with validation summary for each sampling event.

2.1 Sample Collection and Handling

As stipulated in the LTGMP, samples are to be collected during non-storm conditions, i.e., no rain greater than 0.25 inches for 72 hours prior to sampling and no visible surface flow in the stream channel immediately upstream of Detmer Spring. For collection of samples for analysis of volatile organic compounds (VOCs), standard 40-ml glass VOA vials were filled by submerging each vial directly into the spring pool. Samples for analysis of polychlorinated biphenyls (PCBs) and total suspended solids (TSS) were collected by carefully filling a new disposable beaker. The water was transferred from the beaker into pre-cleaned, amber glass 1-liter bottles supplied by the analytical laboratory. Routine sampling parameters, including temperature and conductivity, were measured and recorded. Spring flow rates were too small to measure with the usual stream current velocity instrument, so flows were estimated visually.

2.2 Quality Assurance

For quality assurance purposes, a duplicate sample and a field blank were collected during each sampling event. All environmental and blank samples were labeled and logged onto a chain of custody form. The samples were stored and transported on ice in insulated coolers. Custody of the water samples was maintained by CBS until shipment to the analytical laboratory.

The field blank samples for these sampling events are identified as:

AB0097
AB0100
AB0103
AB0106
AB0109
AB0112
AB0115
AB0118

2.3 Analytical Results

Samples were analyzed by Heritage Laboratories of Indianapolis, Indiana. All samples were analyzed to a detection limit of 0.1 µg/L for all PCB parameters by EPA SW-846 Method 8082. The VOC parameters were analyzed to a detection limit of 5.0 µg/L

(except vinyl chloride, which had a detection limit of 2.0 µg/L) by EPA SW-846 Method 8260B. Samples were also analyzed for TSS by EPA Method 160.2.

Field parameter measurements, PCB and VOC analytical results, and QA/QC results for samples collected from Detmer Spring for the eight quarterly events are presented in Table 1.

3.0 Groundwater Monitoring Conclusions

3.1 Site Related Contaminant Concentrations

Table 1 presents the sampling results for the eight quarters of monitoring at Detmer Spring since the remediation ended. PCB concentrations never exceeded 0.13 µg/L and were below the detection limit of 0.1 µg/L for the last two quarters. The limit for PCB discharge to surface water is 0.3 µg/L, and was never exceeded during the eight quarters.

Two VOC contaminants, 1,1-dichloroethene and cis-1,2-dichloroethene, were only detected once during the eight quarters. The first was detected in the first quarter of 2011 and was below detection for the rest of the sampling events; the second was detected in the sixth quarter (second quarter of 2012) and was below detection for the rest of the sampling events. In the LTGMP, the action levels for spring water samples will be set by aquatic water quality standards in Indiana for protection of aquatic species and/or human contact to stream water [Table 6-1 in 327 Indiana Administrative Code Article 2 (Reference 11)]. Cis-1,2-dichloroethene is not listed in Table 6-1 and there is no acute aquatic criterion (AAC) for 1,1-dichloroethene. The continuing criterion concentration (CCC) for 1,1-dichloroethene outside of the mixing zone for human health (30 day average) is 18.5 µg/l, and the CCC for point of water intake human health 30 day average) is 0.33 µg/l. There is no point of water intake anywhere near Detmer Spring, so the CCC human health outside of the mixing zone would apply. The single 1,1-dichloroethene detection was below this criterion.

Tetrachloroethene (also known as perchloroethene or PCE) was present in all eight quarter samples. It ranged from 8.4 µg/L to 13 µg/L. There is no AAC for PCE. The CCC for PCE outside of the mixing zone for human health (30 day average) is 88.5 µg/L. All PCE results are below the standard.

Trichloroethene (TCE) was also present in all eight quarter samples. It ranged from 7.6 µg/L to 12 µg/L. There is no AAC for TCE. The CCC for TCE outside of the mixing zone for human health (30 day average) is 807 µg/L. All TCE results are below the criterion.

As Table 1 shows, no other site-related VOC contaminants were detected at Detmer Spring.

3.2 Mann-Kendall Trend Analysis and Recommendations for Frequency and Duration of Additional Sampling

Table 2 shows the results of the Mann-Kendall non-parametric trend analysis for the site-related contaminants detected at Detmer Spring. PCBs showed a decreasing trend and the other contaminants showed stable/no trend results.

Based on the trend analysis and fact that all site-related contaminants are below the water quality criteria, CBS recommends that the frequency of sampling be reduced to semi-annually until the next five-year review period. If at that time all site-related contaminants are decreasing or stable based on the Mann-Kendall trend analysis, and have not exceeded the water quality standards, then CBS recommends sampling be discontinued.

REFERENCES

1. CBS Corporation, "FINAL LONG TERM GROUNDWATER MONITORING PLAN FOR THE ABB BLOOMINGTON PLANT SITE, Administrative Settlement Agreement and Order on Consent for Removal Action, Docket No. V-W-08-C-890, Addendum 2 to the Bloomington ABB QAPP, April, 2012.

2. Administrative Order on Consent with the U.S. EPA, Region 5, "The Administrative Settlement Agreement and Order on Consent for Removal Action, Docket No. V-W- 08-C-890" (AOC), January 3, 2008.

3. CBS Corporation, "FINAL REPORT, COMPLETION OF REMOVAL ACTION FOR BLOOMINGTON ABB, Bloomington, Indiana, Monroe County", February 2010.

4. CBS Corporation, "GROUNDWATER AND SURFACE WATER INVESTIGATION PLAN FOR THE ABB BLOOMINGTON PLANT SITE, Addendum 1 to the Bloomington ABB QAPP", March 2008.

5. CBS Corporation, "Report of Results for the GROUNDWATER AND SURFACE WATER INVESTIGATION PLAN FOR THE ABB BLOOMINGTON PLANT SITE, Addendum 1 to the Bloomington ABB QAPP", October 2010.

6. CBS Corporation, "ABB Bloomington Plant Site Groundwater Monitoring, Four Quarterly Sampling Events in 2011", February 27, 2012.

7. CBS Corporation, "ABB Bloomington Plant Site Groundwater Monitoring, First Quarter 2012 Sampling Event – Detmer Spring", May 7, 2012.

8. CBS Corporation, "ABB Bloomington Plant Site Groundwater Monitoring, Second Quarter 2012 Sampling Event – Detmer Spring", July 27, 2012.

9. CBS Corporation, "ABB Bloomington Plant Site Groundwater Monitoring, Third Quarterly Sampling Event in 2012", October 31, 2012.

10. CBS Corporation, "ABB Bloomington Plant Site Groundwater Monitoring, Fourth Quarterly Sampling Event in 2012", February 20, 2013.

11. Indiana Administrative Code, Title 327 Water Pollution Control Board, Article 2. Water Quality Standards, latest update January 2, 2013.

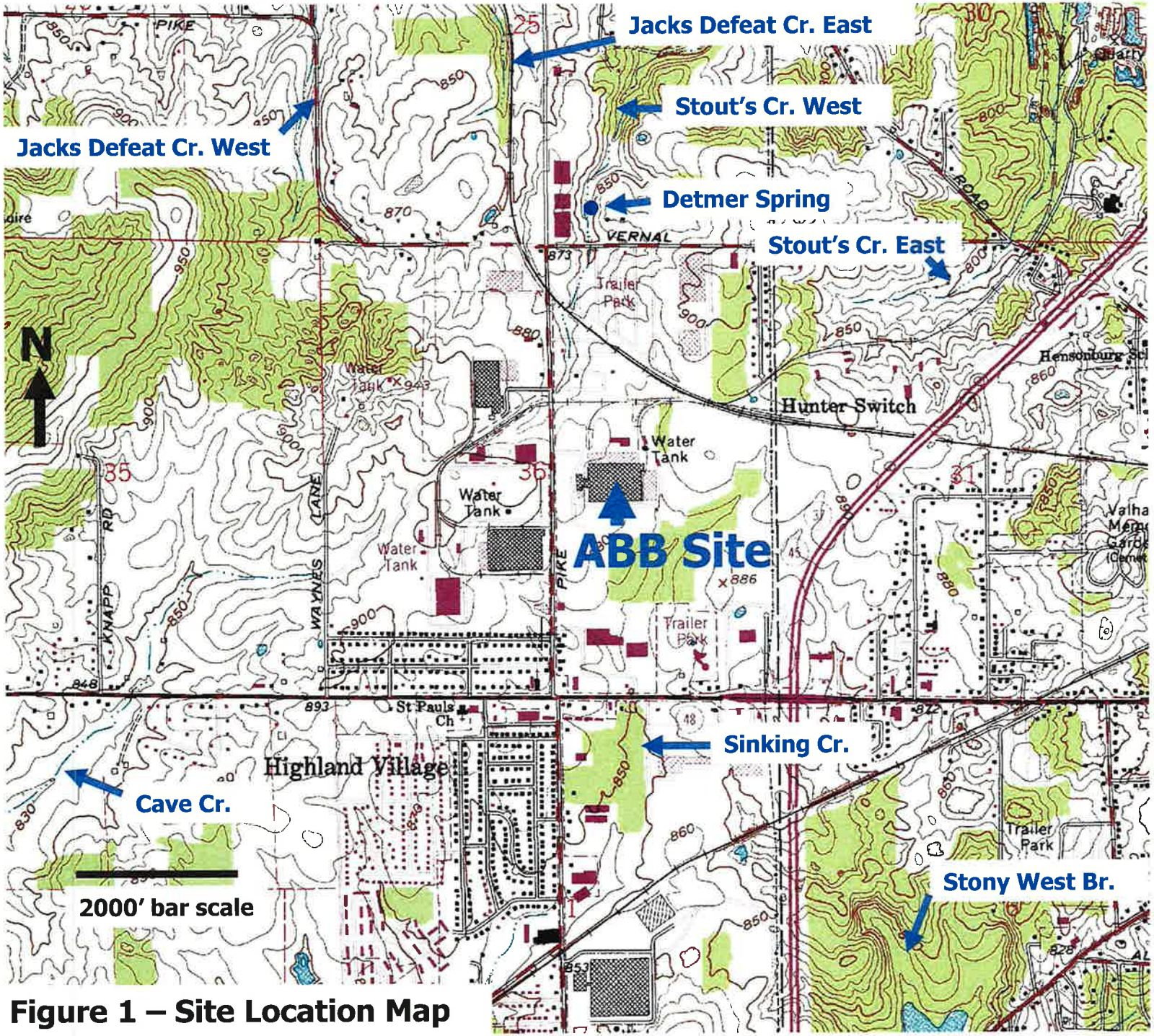

Figure 1 – Site Location Map

Table 1
Quarterly Sampling at Detmer Spring
ABB Bloomington Plant Site
2011 Analytical Results

Quarter	Q1			Q2			Q3			Q4		
SampleId	AB0095	AB0096	AB0097	AB0098	AB0099	AB0100	AB0101	AB0102	AB0103	AB0104	AB0105	AB0106
SampleType	Normal	Duplicate	Field Blank	Normal	Duplicate	Field Blank	Normal	Duplicate	Field Blank	Normal	Duplicate	Field Blank
CollectDate	28-Mar-11	28-Mar-11	28-Mar-11	30-Jun-11	30-Jun-11	30-Jun-11	22-Sep-11	22-Sep-11	22-Sep-11	13-Dec-11	13-Dec-11	13-Dec-11
Conductivity (uS/cm)	605	605	---	541	541	---	603	603	---	592	592	---
Temperature (deg C)	12.4	12.4	---	14.6	14.6	---	15.8	15.8	---	13.1	13.1	---
Flow (gpm)	8	8	---	10	10	---	3.5	3.5	---	15	15	---
Parameter												
PCB AROCLOR 1016	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
PCB AROCLOR 1221	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
PCB AROCLOR 1232	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
PCB AROCLOR 1242	BDL	**0.12**	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
PCB AROCLOR 1248	BDL	BDL	BDL	**0.12**	**0.11**	BDL	**0.11**	**0.11**	BDL	**0.10**	**0.11**	BDL
PCB AROCLOR 1254	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
PCB AROCLOR 1260	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
PCB AROCLOR 1262	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
SUSPENDED SOLIDS (mg/L)	**NR**	**25**	BDL	**16**	**15**	BDL	**10**	**14**	BDL	**14**	**29**	BDL
1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,1-DICHLOROETHANE	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,1-DICHLOROETHENE	**5.5**	**5.2**	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
CIS-1,2-DICHLOROETHENE	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
TRANS-1,2-DICHLOROETHENE	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
DICHLOROMETHANE	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
TETRACHLOROETHENE	**13**	**13**	BDL	**12**	**10**	BDL	**9.2**	**9.6**	BDL	**9.4**	**9.7**	BDL
1,2,3-TRICHLOROBENZENE	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2,4-TRICHLOROBENZENE	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,1,1-TRICHLOROETHANE	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
TRICHLOROETHENE	**10**	**9.9**	BDL	**8.7**	**8.7**	BDL	**7.6**	**8.2**	BDL	**9.3**	**10**	BDL
TOLUENE	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2,4-TRIMETHYLBENZENE	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,3,5-TRIMETHYLBENZENE	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
VINYL CHLORIDE	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

BDL = Below Detection Limit
Except as noted, all results are reported in units of ug/L.

Table 1 (continued)
Quarterly Sampling at Detmer Spring
ABB Bloomington Plant Site
2012 Analytical Results

Quarter	Q1			Q2			Q3			Q4		
SampleId	AB0107	AB0108	AB0109	AB0110	AB0111	AB0112	AB0113	AB0114	AB0115	AB0116	AB0117	AB0118
SampleType	Normal	Duplicate	Field Blank	Normal	Duplicate	Field Blank	Normal	Duplicate	Field Blank	Normal	Duplicate	Field Blank
CollectDate	21-Mar-12	21-Mar-12	21-Mar-12	20-Jun-12	20-Jun-12	20-Jun-12	20-Sep-12	20-Sep-12	20-Sep-12	19-Dec-12	19-Dec-12	19-Dec-12
Conductivity (uS/cm)	632	632	---	690	690	---	628	628	---	594	594	---
Temperature (deg C)	13.4	13.4	---	14.9	14.9	---	16.0	16.0	---	14.0	14.0	---
Flow (gpm)	8	8	---	1.5	1.5	---	5	5	---	8	8	---
Parameter												
PCB AROCLOR 1016	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
PCB AROCLOR 1221	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
PCB AROCLOR 1232	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
PCB AROCLOR 1242	**0.10 J**	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
PCB AROCLOR 1248	BDL	BDL	BDL	BDL	**0.13**	BDL	BDL	BDL	BDL	BDL	BDL	BDL
PCB AROCLOR 1254	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
PCB AROCLOR 1260	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
PCB AROCLOR 1262	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
SUSPENDED SOLIDS (mg/L)	**14**	**6**	BDL	**10**	**9**	BDL	**25**	**26**	BDL	**9**	**7**	BDL
1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,1-DICHLOROETHANE	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,1-DICHLOROETHENE	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
CIS-1,2-DICHLOROETHENE	BDL	BDL	BDL	**5.6**	**6.1**	BDL	BDL	BDL	BDL	BDL	BDL	BDL
TRANS-1,2-DICHLOROETHENE	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
DICHLOROMETHANE	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
TETRACHLOROETHENE	**11 J**	**9.6**	BDL	**8.6 J**	**8.4 J**	BDL	**11**	**11**	BDL	**10**	**10**	BDL
1,2,3-TRICHLOROBENZENE	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2,4-TRICHLOROBENZENE	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,1,1-TRICHLOROETHANE	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
TRICHLOROETHENE	**12 J**	**11**	BDL	**9.9**	**10**	BDL	**9.1**	**8.6**	BDL	**9.3**	**9.3**	BDL
TOLUENE	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2,4-TRIMETHYLBENZENE	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,3,5-TRIMETHYLBENZENE	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

BDL = Below Detection Limit
Except as noted, all results are reported in units of ug/L.
J = Estimate; Below calibration range (PCB parameters), Or QA/QC data indicated an analytical bias (VOC parameters).

Table 2 – Mann-Kendall Trend Analysis of Eight Quarters at Detmer Spring

PCBs

S Value

Neg	Pos
22	5
S Value	-17
Evaluation	Decreasing

Mann-Kendall Trend: Quarters 0-8

Quarter	1	2	3	4	5	6	7	8
Data	0.12	0.115	0.11	0.105	0.1	0.13	0	0
0.12		-0.005	-0.01	-0.015	-0.02	0.01	-0.12	-0.12
0.115			-0.005	-0.01	-0.015	0.015	-0.115	-0.115
0.11				-0.005	-0.01	0.02	-0.11	-0.11
0.105					-0.005	0.025	-0.105	-0.105
0.1						0.03	-0.1	-0.1
0.13							-0.13	-0.13
0								0
0								

1,1-DCE

S Value

Neg	Pos
7	0
S Value	-7
Evaluation	Stable/No Trend

Mann-Kendall Trend: Quarters 0-8

Quarter	1	2	3	4	5	6	7	8
Data	5.35	0	0	0	0	0	0	0
5.35		-5.35	-5.35	-5.35	-5.35	-5.35	-5.35	-5.35
0			0	0	0	0	0	0
0				0	0	0	0	0
0					0	0	0	0
0						0	0	0
0							0	0
0								0
0								

PCE

S Value

Neg	Pos
17	10
S Value	-7
Evaluation	Stable/No Trend

Mann-Kendall Trend: Quarters 0-8

Quarter	1	2	3	4	5	6	7	8
Data	13	11	9.4	9.55	10.3	8.5	11	10
13		-2	-3.6	-3.45	-2.7	-4.5	-2	-3
11			-1.6	-1.45	-0.7	-2.5	0	-1
9.4				0.15	0.9	-0.9	1.6	0.6
9.55					0.75	-1.05	1.45	0.45
10.3						-1.8	0.7	-0.3
8.5							2.5	1.5
11								-1
10								

Table 2 – Mann-Kendall Trend Analysis of Eight Quarters at Detmer Spring (continued)

TCE

S Value

Neg	Pos
13	14
S Value	1
Evaluation	Stable/No Trend

Mann-Kendall Trend: Quarters 0-8

Quarter	1	2	3	4	5	6	7	8
Data	9.95	8.7	7.9	9.65	11.5	9.95	8.85	9.3
9.95		-1.25	-2.05	-0.3	1.55	0	-1.1	-0.65
8.7			-0.8	0.95	2.8	1.25	0.15	0.6
7.9				1.75	3.6	2.05	0.95	1.4
9.65					1.85	0.3	-0.8	-0.35
11.5						-1.55	-2.65	-2.2
9.95							-1.1	-0.65
8.85								0.45
9.3								

cis-DCE

S Value

Neg	Pos
2	5
S Value	3
Evaluation	Stable/No Trend

Mann-Kendall Trend: Quarters 0-8

Quarter	1	2	3	4	5	6	7	8
Data	0	0	0	0	0	5.85	0	0
0		0	0	0	0	5.85	0	0
0			0	0	0	5.85	0	0
0				0	0	5.85	0	0
0					0	5.85	0	0
0						5.85	0	0
5.85							-5.85	-5.85
0								0
0								